DOCUMENT RESUME

ED 028 949 24 SE 006 622

By-Davis, Robert B.

The Madison Project Presents Materials for a Supplementary Mathematics Program for Grades 2 Through 8, Newsletter No. 1.

Syracuse Univ., N.Y.; Webster Coll., Websters Grove, Mo.

Spons Agency-National Science Foundation, Washington, D.C.; Office of Education (DHEW), Washington, D.C. Bureau of Research.

Bureau No-BR-5-1172

Pub Date Jul 65

Contract-OEC-6-10-183

Note-15p.

EDRS Price MF-$0.25 HC-$0.85

Descriptors-Curriculum, *Elementary School Mathematics, *Films, *Instructional Materials, Mathematics, *Secondary School Mathematics

Identifiers-The Madison Project

This pamphlet from The Madison Project announces the release of films and other materials for a supplementary mathematics program for grades 2 through 8, and for a course in ninth grade algebra. These materials are designed to be used in conjunction with the regular school program in arithmetic and mathematics. Among the films available are (1) A Lesson With Second Graders, (2) Graphing a Parabola, (3) Guessing Functions, and (4) Inservice Courses 1 and 2. (RP)

ED028949

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

CUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE
... OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS
STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION
POSITION OR POLICY

BR-5-1172
PA24

THE MADISON PROJECT

SYRACUSE UNIVERSITY
WEBSTER COLLEGE

OEC-6-10-183

THE MADISON PROJECT PRESENTS MATERIALS FOR A SUPPLEMENTARY MATHEMATICS PROGRAM FOR GRADES 2 THROUGH 8

SE 006 622

NEWSLETTER NO. 1

JULY 1965

The Madison Project maintains offices at three locations:

The Madison Project
Webster College
8356 Big Bend Blvd.
Webster Groves, Mo. 63119

The Madison Project
Syracuse University
918 Irving Avenue
Syracuse, N. Y. 13210

The Madison Project
P.O. Box 1176
Weston, Conn. 06883

Financial support for the Madison Project is provided by the National Science Foundation and the Division of Educational Research of the United States Office of Education, and other agencies.

The Madison Project announces the release of films and other materials for a supplementary mathematics program for grades 2 through 8 (to be used in conjunction with your present school program in arithmetic and mathematics), and for a course in 9th grade algebra.

THE SUPPLEMENTARY PROGRAM

FOR GRADES 2 THROUGH 8

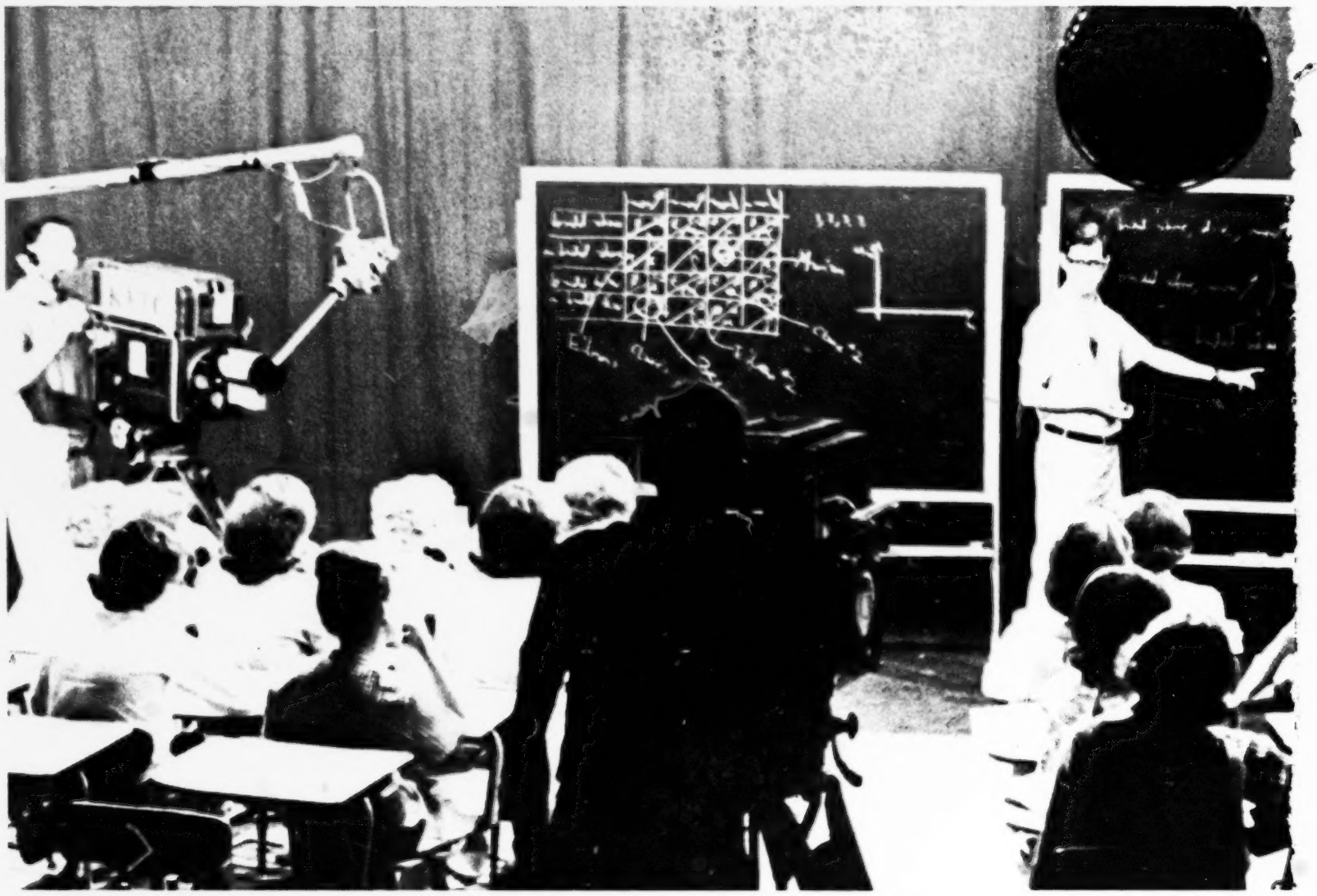
This program can be used to add carefully tested "Creative Learning Experiences" to your regular school program, that will

introduce 2nd graders to Cartesian co-ordinates and the arithmetic of signed numbers;

give children in grades 3 through 8 experience with variables, equations, inequalities, functions, graphs, measurement problems, the arithmetic of signed numbers, and other topics.

In order to present these "Creative Learning Experiences" to teachers in a form that will help *them* to teach this same material as easily and successfully as possible, the Madison Project has made a set of films showing *actual classroom lessons* and has prepared two In-Service Courses for teachers. (In addition, a textbook entitled *Discovery in Mathematics* is available from Addison-Wesley Publishing Company, Reading, Massachusetts.)

The following materials are available from The Madison Project, Webster College, 8356 Big Bend Boulevard, Webster Groves, Missouri 63119 (telephone 314 WO 2-0440).



FILMS

(All films are available in 16 mm., black and white; some are also available as 8 mm. cartridges for the Fairchild Mark IV projector.)

*†1. A LESSON WITH SECOND GRADERS.

This film shows second graders who have no previous instruction in "modern" mathematics. This is an introductory lesson dealing with signed numbers and Cartesian co-ordinates. (running time: approximately 31 minutes)

*Films marked with an asterisk are accompanied by a printed pamphlet that discusses the lesson shown on the film, gives hints on how to teach it, etc.

†Films marked with a dagger are available either in 16 mm. black and white, or else as 8 mm. cartridges for the Fairchild Mark IV cartridge projector. In ordering, please indicate which you prefer. (Of course, either kind can be shown only on a projector of the appropriate type. Do not order the cartridge version unless you have a Fairchild Mark IV projector.)

rental:

16 mm. b & w $6.00

8 mm. cartridge for the Fairchild Mark IV projector $6.00

purchase:

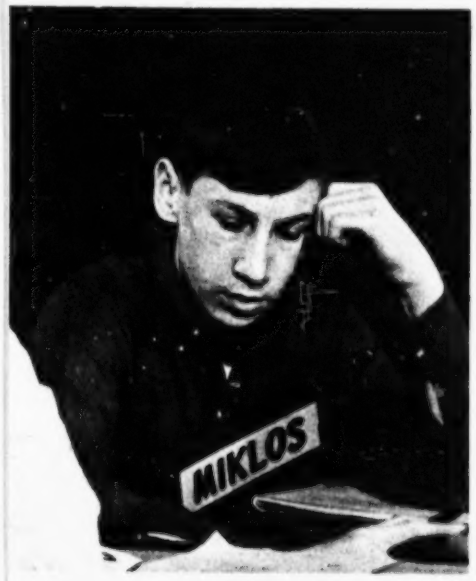
16 mm. b & w $140.00

8 mm. cartridge $140.00

One copy of the pamphlet *Notes on the Film: A Lesson with Second Graders* is included free with each film rental or purchase. Additional copies are available as follows:

single copies $0.25

in orders of 10 or more $0.25



*2. FIRST LESSON.

This film also shows an introductory lesson, with children who have no previous experience with "modern" mathematics. This time, however, the children are from various grades, grade 3 through grade 7. Consequently this film shows, in effect, an "ungraded" approach. The mathematical content is: variables, open sentence and truth set, the arithmetic of signed numbers, and Cartesian co-ordinates. (running time: approximately one hour)

rental: 16 mm. b & w $8.00

purchase: 16 mm. b & w $195.00

One copy of the pamphlet *Notes on the Film: First Lesson* is included free with each film rental or purchase. Additional copies are available as follows:

single copies $0.30
in orders of 10 or more $0.30

3. SECOND LESSON.

The same children as in *First Lesson*, one day later. The mathematical content is: open sentences, identities, linear graphs. (running time: approximately one hour)

rental: 16 mm. b & w $8.00

purchase: 16 mm. b & w $195.00

†4. GRAPHING A PARABOLA.

A sixth-grade class of children, who already know linear graphs, Cartesian co-ordinates, and the arithmetic of signed numbers, tackle a new topic: graphing the truth set for a new kind of open sentence. The result turns out to be a strange new curve which mathematicians call a *parabola*. (running time: approximately 22 minutes)

rental: 16 mm. b & w $4.00
8 mm. cartridge $4.00

purchase: 16 mm. b & w $110.00
8 mm. cartridge $110.00

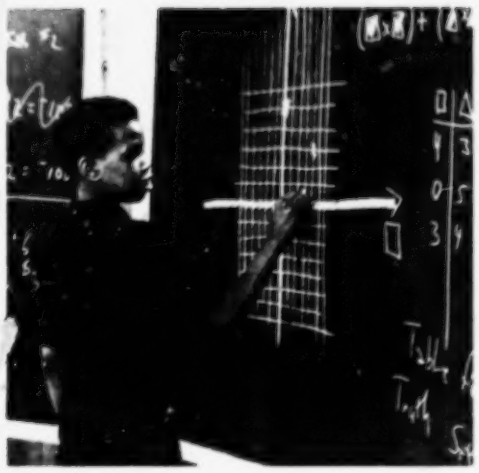
†5. GUESSING FUNCTIONS.

This film shows a class of seventh-grade children playing the following game: several children get together and make up a rule (such as: "whatever number we tell them, they'll double it and add 5"). They do not tell us their rule. We tell them a number, they use their rule on it and tell us the answer. This keeps on, with more numbers, until we are able to guess their rule. (running time: approximately 17 minutes)

rental:	16 mm. b & w	$4.00
	8 mm. cartridge	$4.00
purchase:	16 mm. b & w	$110.00
	8 mm. cartridge	$110.00

6. IN-SERVICE COURSE I.

This combines filmed and printed material. It is intended to help teachers in grades 2 through 8 to teach the supplementary mathematical program which has been developed by the Madison Project. The mathematical content deals with variables, open sentences and truth sets, the arithmetic of signed numbers, Cartesian coordinates, functions and numeral systems. The course provides for 12 to 15 sessions, and involves 10 films.



Prices for the rental of films and purchase of printed materials are as follows:

For one class of 30 teachers:

rental of films (for entire course) . .	$60.00
30 copies of printed material . . .	$100.00
additional copies of printed materials (beyond a total of 30)	$3.00

Separate copies of printed material (for examination only; the printed material cannot be used effectively without the films) $4.00
purchase: to be announced

7. IN-SERVICE COURSE II.

This course is a sequel to In-Service I. The mathematical content deals with the arithmetic of signed numbers, algebraic identities (including the distributive law, the commutative law for addition, etc.) linear graphs, graphs of conic sections, algebraic derivations (i.e., proofs of algebraic theorems), mathematical logic, implication, uniqueness, equivalent equations, and measurement uncertainties. Some pedagogical remarks are also included. This material is developed in a form suitable for use in grades 2 through 9.

Available autumn, 1965; prices to be announced.

General Information About The Madison Project:

Several reports and reprints are available describing various aspects of Madison Project materials. Among those presently available are the following:

8. THE MADISON PROJECT.

A Brief Introduction to Materials and Activities

single copies: $0.60
in orders of 10 or more $0.60

9. THE EVOLUTION OF SCHOOL MATHEMATICS.

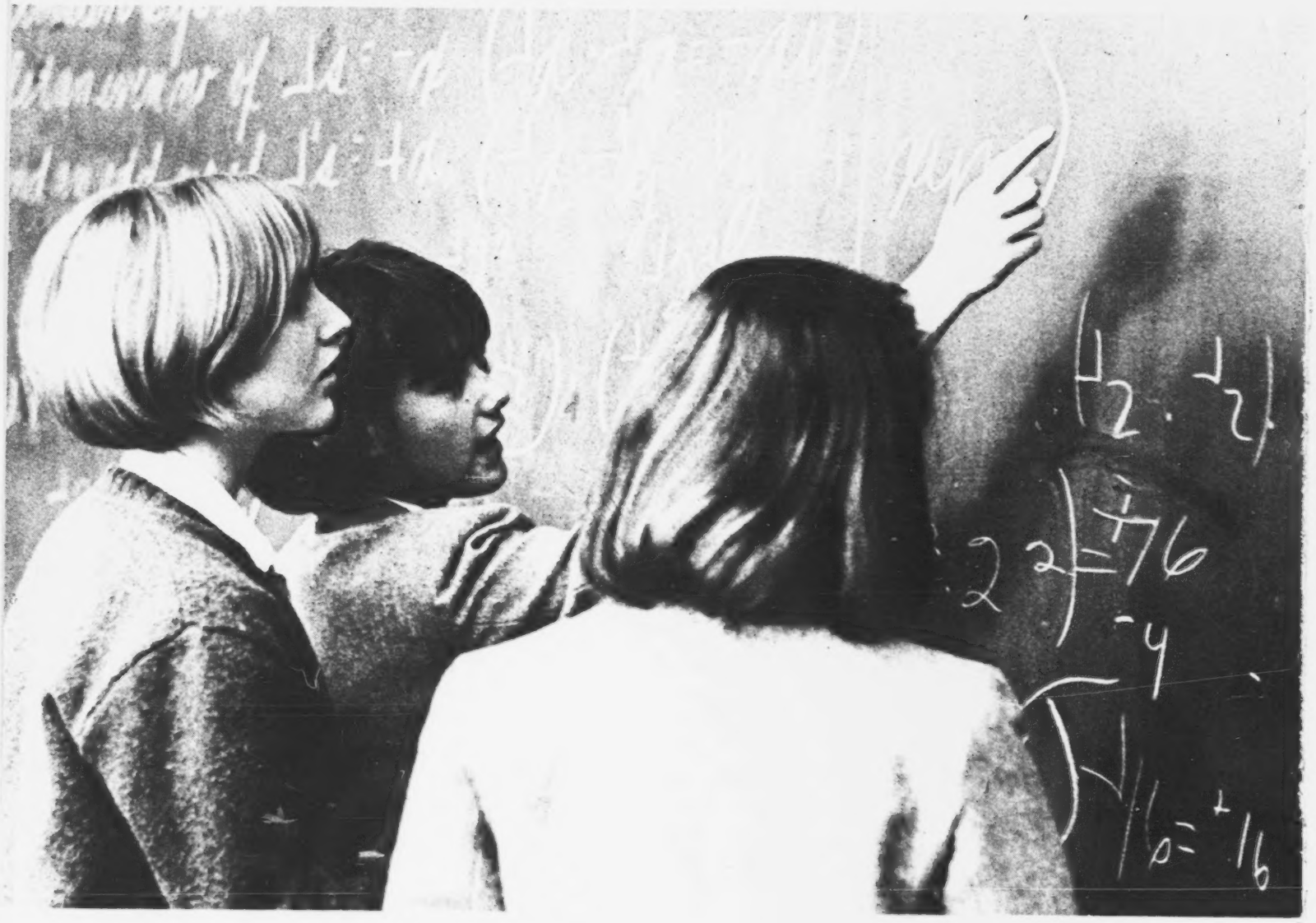
single copies: $0.25
orders of 10 or more $0.25

10. THE MADISON PROJECT'S APPROACH TO A THEORY OF INSTRUCTION

. . . . . $0.35

11. SOME REMARKS ON "LEARNING BY DISCOVERY"

. . . . . $0.50

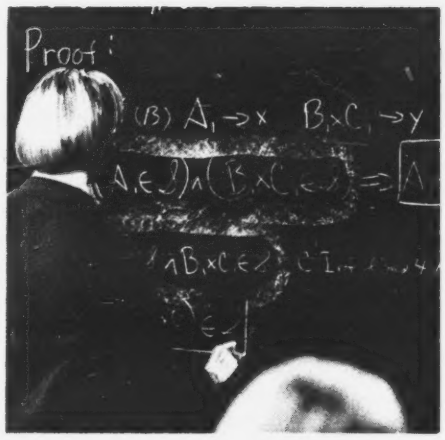

(-2·-2)
2 2)=76
-4
=16

THE NINTH-GRADE COURSE

The Madison Project has been working for the past two years to develop a ninth-grade mathematics course that would combine the essentials of "traditional" ninth-grade algebra with three new topics: mathematical logic; laboratory science experiments; and the theory of limits for infinite sequences. The course uses an axiomatic approach throughout and recognizes models for axiom systems.

It is not, however, counter-intuitive; considerable emphasis is placed on intuitive aspects.

The Project does not plan to write a textbook for this course, but does intend to report it in detail. A mathematically-sophisticated teacher could teach the course from reading the Project's reports; it is also hoped that prospective authors may use these reports as a basis for writing their own textbooks. At present, one printed report and a set of films are available describing this ninth-grade course.



12. EXPERIMENTAL COURSE REPORT NUMBER 1.

Grade Nine (Report #1, June 1964) . . . . . $1.50 per copy

Various films are also available. For information, write to The Madison Project at its Webster College office.

Director: Professor Robert B. Davis,
Syracuse University and Webster College

Associate Director:
Professor Katharine Kharas,
Webster College

Research Associate:
Beryl S. Cochran
(Weston, Connecticut)

Co-ordinator for Syracuse University:
Professor Donald E. Kibbey, Chairman,
Department of Mathematics,
Syracuse University

Co-ordinator for Webster College:
Sister M. Jacqueline Grennan, S.L.,
President, Webster College

Senior Demonstration Teachers:
Donald Cohen
Paul Merrick
Frank VanAtta
Elizabeth Bjork
Thomas Davis
Marilyn DeSanta

Administrative Assistant:
Martha Bowen

Manuscript Production:
Bernice Talamante

Fiim Circulation:
Darlene Vertrees
Dorothy Long